

# FastStart<sup>®</sup> EMS



## Patient Operating Manual

VQ Wholesale is not liable for any misuse or misunderstanding of the FastStart® EMS product or patient manual. Please call your local representative if any additional assistance is required regarding this product and its patient instructions.



Irvine, CA 92614

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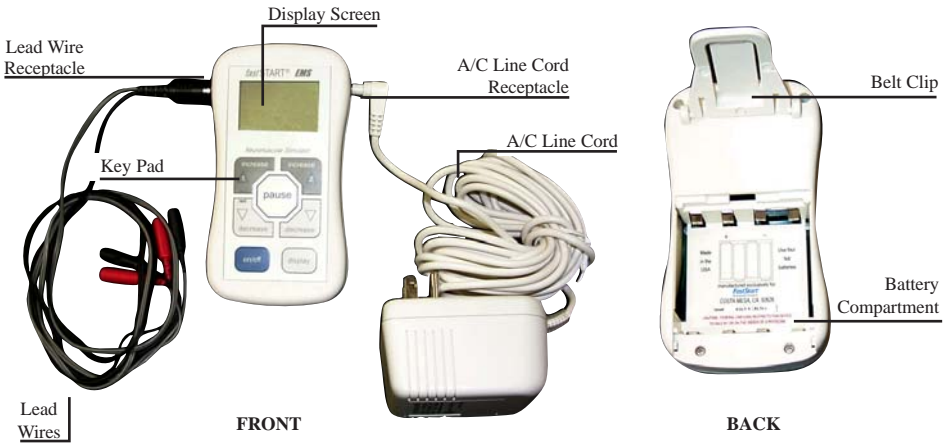
# System Components

The FastStart® EMS stimulation system is operated with:

- One (1) FastStart EMS stimulator
- One (1) package of electrodes
- One (1) lead wire
- Four (4) AA alkaline batteries, or one (1) battery pack

In addition your system comes with:

- One (1) carrying case
- One (1) operating manual
- One (1) AC Adapter



Lead Wires



# Letter to the Patient

Your physician has selected the FastStart® EMS device because it is the most applicable to your specific need.

Your FastStart EMS is a portable stimulator that generates small pulses of electrical current that are delivered through lead cables and the electrodes you place on your skin. These electrical pulses pass through your skin and activate underlying nerves. At lower levels of stimulation, the FastStart EMS stimulates sensory nerves, producing a tingling sensation. Higher levels of stimulation activate motor nerves, resulting in muscle contractions.

It is important to realize that the FastStart EMS is not a substitute for proper medical evaluation and treatment. You should always consult your physician or therapist if you have specific questions or problems regarding the use of your stimulator. Your physician or therapist possesses technical knowledge about the FastStart EMS and is familiar with your specific condition and requirements. In addition, always follow the instructions of your physician or therapist to gain the most benefit from your FastStart EMS.

Your physician or therapist will instruct you on the correct degree of stimulation and provide you with direction on the proper mode of operation for your condition.

Please read the following sections carefully before using your FastStart EMS.

- Precautions and Prescription Information
- Controls and Features
- Treatment Sessions
- Care and Maintenance

# Precautions and Prescription Information

**NOTE:** Please read the following prescription information carefully before using your FastStart®EMS. If you have any questions on this information, consult with your physician or therapist before proceeding.

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**CAUTION:** Federal (U.S.A.) law restricts this device to sale by or on the order of a practitioner licensed by law of the State in which he/she practices to use or order the use of the device.

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## Indications

- Relaxation of muscle spasms.
- Prevention or retardation of disuse atrophy.
- Increasing local blood circulation.
- Muscle re-education.
- Immediate postsurgical stimulation of calf muscles to prevent venous thrombosis.
- Maintaining or increasing range of motion.

Stimulators should only be used under medical supervision for adjunctive therapy for the treatment of medical diseases and conditions.

## Contraindication

- Should not be used on patients with cardiac demand pacemakers.

## Warnings

- The long-term effects of chronic electrical stimulation are unknown.
- Stimulation should not be applied over the carotid sinus nerves, particularly in patients with a known sensitivity to the carotid sinus reflex.
- Stimulation should not be applied over the neck or mouth. Severe spasm of the laryngeal and pharyngeal muscles may occur and the contractions may be strong enough to close the airway or cause difficulty in breathing.
- Stimulation should not be applied transthoracically in that the introduction of electrical current into the heart may cause cardiac arrhythmias.
- Stimulation should not be applied transcerebrally.
- Stimulation should not be applied over swollen, infected, or inflamed areas or skin eruptions, e.g., phlebitis, thrombophlebitis, varicose veins, etc.
- Stimulation should not be applied over, or in proximity to cancerous lesions.

## **Precautions**

- Safety for use during pregnancy has not been established.
- Caution should be used for patients with suspected or diagnosed heart problems.
- Caution should be used for patients with suspected or diagnosed epilepsy.
- Caution should be used in the presence of the following:
  - When there is a tendency to hemorrhage following acute trauma or fracture;
  - Following recent surgical procedures when muscle contraction may disrupt the healing process;
  - Over the menstruating or pregnant uterus; and
  - Over areas of the skin which lack normal sensation.
- Some patients may experience skin irritation or hypersensitivity due to the electrical stimulation or electrical conductive medium. The irritation can usually be reduced by using an alternate conductive medium, or alternate electrode placement.
- Electrode placement and stimulation settings should be based on the guidance of the prescribing practitioner.
- Keep out of the reach of children.
- Should be used only with the leads and electrodes recommended for use by the manufacturer.
- Portable stimulators should not be used while driving, operating machinery, or during any activity in which involuntary muscle contractions may put the user at undue risk of injury.

## **Adverse Reactions**

- Skin irritation and/or rash beneath the electrodes have been reported with the use of stimulators.

# Controls and Features

The FastStart®EMS can be operated on a tabletop by folding out the belt clip and setting it on top of a table. You can also attach the unit to your belt by folding the clip against the unit and fastening the clip over the top of a belt or pants.



## **On/Off Button:**

Press the On/Off button when you are ready to begin your therapy session. The FastStart EMS always turns on with the intensity set to 'Off.' Pressing the On/Off button at any time during the therapy session will immediately stop stimulation and turn the device off. If you press and hold the On/Off button, while turning the unit on, you will see your serial # displayed on the screen.

## **Preset Selection:**

To access your presets you press the display button. You can now access the various presets by pressing the increase or decrease buttons. When you get to the preset you want to use press the display button again to return to the main screen.

## **Next Button (Decrease 1):**

Used by your clinician to set up the unit. This is the decrease button for channel 1.

## **Increase Button:**

You have 2 channels on your FastStart EMS. You have an increase button for each channel, labeled. Pressing and releasing or pressing and holding\* this button increases the intensity of the stimulation for the respective channel. Channel 1 will power the electrodes attached to your grey lead wire. Channel 2 will power the electrodes attached to your black lead wires. The display will show you in mA (milliamperes) how high your intensity is set. The range is from 0 to 100 mA in 1mA increments.

## **Decrease Button:**

Pressing and releasing, or pressing and holding this button decreases the intensity of the stimulation. When your treatment is over the unit will turn off automatically. It is not necessary to decrease the intensity to turn the unit off.

## **Pause Button:**

Press and release this button to instantly stop stimulation. The device remains on and the timers are paused. Press and release the button a second time to return to the same point in the therapy program.

## **Save Button (Increase 1):**

Used by your clinician to set up the unit. This is also the same button as increase channel 1.

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**\*CAUTION:** Pressing and holding the increase button can produce a quick surge of electrical energy.

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**LCD Display:**

The LCD display will keep you informed about your treatment showing you the following items:

- Upper left corner will indicate the Preset you are using.
- Upper right corner will indicate the time remaining in your treatment.
- Lower row left is the output amplitude of channel 1.
- Lower row right is the output amplitude of channel 2.
- In between the rows there are flashing bars to indicate the unit is in treatment mode and not paused.
- Low battery indicator to the left of the preset display.
- Pause indicator to the right of the remaining time display.

**Low Battery Indicator:**

This will flash on when the batteries are nearly depleted. This will indicate you have anywhere from 30 minutes to 2 hours left, depending on your parameter settings. Try to replace them as soon as possible. When the batteries are sufficiently depleted, the device automatically shuts itself off.

**Belt Clip:**

The belt clip is used to attach the FastStart EMS to a belt loop for mobility during a therapy session. By rotating the belt clip to the upper position the FastStart EMS can be used as a table top device.

**Lead Wire Socket:**

The electrode lead wire is plugged into this socket. There is an index mark on the unit that will align with the index mark on the lead wire.

**Trigger Jack:**

This connector on the bottom of the unit will allow you to connect to an outside control which will control the stimulator timing.

**Power Supply:**

For your convenience, the FastStart EMS can be operated with an AC adapter. Before connecting or disconnecting the AC Adapter, press the pause button. Then, either connect or disconnect the AC Adapter and press the pause button again to resume treatment. THE AC ADAPTER WILL NOT CHARGE THE BATTERIES THAT ARE IN THIS UNIT, THESE ARE NOT RECHARGEABLE BATTERIES. You do not have to remove the batteries to run the unit using the AC adapter. Use of other products' AC adapters, could possibly cause damage to your FastStart EMS, use only the AC adapter provided.

**Battery Pack:**

These packs are designed to make it easier to use your units with battery power. They must be inserted with the removal ribbon up so you can remove them when they have depleted. These are not rechargeable, please discard when they are completely depleted. These are alkaline batteries and can be discarded in normal waste systems.

# Proper Skin Care

By properly caring for skin covered by electrodes, you will:

- Allow more stimulation to reach targeted nerves.
- Prolong the life of your electrodes.
- Reduce the chance that any skin irritation will develop.

To reduce the risk of skin irritation, observe the following instructions for proper skin care before each treatment. However, if skin irritation develops, remove the electrodes, discontinue using your FastStart®EMS and consult your physician or therapist.

- Wash all electrode sites with mild soap and water before applying electrodes.
- Dry your skin thoroughly before electrode application.
- Trim excess body hair from electrode sites with scissors, being careful not to cut (or break) the skin.

# Treatment Sessions

1. Insert (4) double AA batteries or (1) battery pack into the FastStart®EMS as shown in the battery compartment and then replace the battery door. If desired, use the AC adapter that came with your FastStart EMS instead of batteries
2. Prepare the skin: Wash the electrode application sites with mild soap and water then dry skin thoroughly. Remove any excess body hair with a pair of scissors, being careful not to cut your skin.
3. Connect the lead cables to the electrodes. Do not use unnecessary force in connecting the electrodes to the lead wires. If they do not fit, use a different set of electrodes, and return the unusable electrodes to your physician or therapist.
4. Place the electrodes on the sites prescribed by your physician or therapist and press them firmly onto the skin.
5. Insert the end of the lead wire into the FastStart EMS.
6. Turn the FastStart EMS on by pressing and releasing the On/Off button.
7. Carefully increase the stimulation intensity level by pressing the Increase button. Slowly continue increasing the stimulation level to the amount prescribed by your physician or therapist.
8. At the end of the prescribed treatment time, the FastStart EMS will automatically turn itself off.

## **At the end of your Treatment Session:**

1. When your therapy session is complete and the FastStart EMS has turned itself off, unplug the lead wires from the FastStart EMS.
2. Disconnect the lead wires from the electrodes.
3. Properly store your electrodes for your next treatment.

# Care and Maintenance

## Cleaning and Storage:

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**CAUTION: Do not immerse the FastStart®EMS stimulator, AC adapter, or batteries in water.**

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Maintenance, care and cleaning of your FastStart EMS are quick and easy procedures when these instructions are followed.

Clean the outside of the FastStart EMS casing as needed with a damp cloth and mild soap. Never immerse your stimulator or batteries in water, alcohol or other fluids since this could seriously damage the internal electronics. Avoid using cleaning fluids or solvents to remove stains and dirt because such liquids may damage the casing.

### Storage:

When not in use, store your FastStart EMS in its carrying case to prevent inadvertent damage. During periods of prolonged storage (more than 6 months), remove all batteries to prevent possible damage caused by battery leakage or corrosion.

### Battery Information:

**Safety considerations:** Only use battery packs provided by VQ Wholesale. Do not mix rechargeable batteries with alkaline batteries. Never attempt to recharge alkaline battery packs as an explosion may occur.

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**CAUTION: Always use the battery packs that are provided with your FastStart EMS. For your safety, never attempt to recharge an alkaline battery, as this may result in an explosion. Never mix alkaline with nickel-cadmium batteries.**

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# Technical Data and Specifications

## Physical:

<b>Power Source:</b>	One (1) battery pack, four (4) AA batteries, or AC Adapter
<b>Size:</b>	5.25" x 2.8" x 1.35"
<b>Weight:</b>	10.3 oz. with batteries

## Electrical:

<b>Tolerances:</b>	All electrical specifications are $\pm 10\%$ into a 500 Ohm load impedance for each channel and using the AC Adapter, unless otherwise stated.
<b>Pulse Intensity:</b>	0-100mA peak in 1mA increments
<b>Pulse Shape:</b>	Rectangular
<b>Intrapulse Interval:</b>	0 $\mu$ Sec
<b>Pulse Duration:</b>	50 - 300 $\mu$ Sec in 10 $\mu$ Sec increments
<b>Pulse Frequency:</b>	0-80Hz in 1Hz increments
<b>Pulse Coordination Modes:</b>	Simultaneous or Alternating
<b>Waveform:</b>	Symmetrical or Asymmetrical
<b>Channel 1 Ramp Up Time:</b>	0-9 Seconds in .5-second increments
<b>Channel 1 On Time:</b>	1-99 Seconds in .5-second increments
<b>Channel 2 Ramp Up Time:</b>	0-9 Seconds in .5-second increments
<b>Channel 2 On Time:</b>	1-99 Seconds in .5-second increments
<b>Channel 1 &amp; 2 Ramp Down Time:</b>	0-9 Seconds in .5-second increments
<b>Channel 2 Lag Time:</b>	0-9 Seconds in .5-second increments
<b>Off Time:</b>	0-99 Seconds in 1-second increments

# Technical Data and Specifications (cont.)

**External Trigger # of modes:** 3

**Modes:** 0 = Off  
1 = Normally open switch  
2 = Normally closed switch

**Automatic Switching  
to Next Preset:** 1-75 Presets or OFF

**Treatment Timer:**  
**Range:** Continuous, 1-60 minutes,  
1-150 repetitions  
**Step Size:** 1-30 minutes in 1-minute intervals  
30-60 minutes in 5-minute intervals  
1-30 repetitions in 1-repetition intervals  
30-150 repetitions in 5-repetition intervals

**Compliance Timer:** 0-999hrs, 59min (41.66 days) in  
1-minute intervals

Can be reset by the clinician.

**Number of Preset Programs:** Preprogrammed: 39  
Available: 75

**User Interface:** Custom LCD Display - 2 rows of  
8 characters.

Indicators for Low Battery & Pause.

Flashing indicator to show treatment  
in progress.

# Notes

# Notes



# Notes

# Notes

# Warranty

VQ Wholesale warrants the FastStart® EMS to be free from electrical circuit defects in workmanship and materials for a period of three (3) years upon shipment. The casing and belt clip are warranted to be free from defects in workmanship and materials for one (1) year upon shipment. VQ Wholesale will repair or replace, at its facilities, any units found to have become defective within the warranty period.

This warranty does not apply to accessories, specifically lead wires, electrodes, batteries, tapes, gel, carrying case, AC adapter or other accessories, nor does it apply to stimulators which have been damaged due to misuse, or repaired or altered other than by VQ Wholesale at its facilities.

This warranty is in lieu of any other warranties expressed or implied. No person or entity is authorized to bind VQ Wholesale to any representation of warranty other than those specifically set forth herein.

